

ABSTRACT**METHOD AND APPARATUS INCLUDING IN-RESONATOR IMAGING LENS FOR
IMPROVING RESOLUTION OF A RESONATOR-ENHANCED OPTICAL SYSTEM**

5

A method and apparatus including in-resonator imaging lens for improving resolution of a resonator-enhanced optical system provides resolution improvements for optical inspection and measurement systems, optical storage and retrieval systems as well as other optical systems. An imaging lens is incorporated in the resonator to image a point or area of one of the reflective surfaces of the resonator on a point or area of another reflective surface of the resonator. Resonance may be supported between the two surfaces, or with respect to only one surface with the other surface acting as an intermediary reflector. The partially reflective surface or a totally reflective surface may also be incorporated on a planar outside surface of the imaging lens.

10

15